

AMENDMENTS IN THE CLAIMS:

1-37. (Canceled)

38. (Withdrawn) A transfective liquid crystal display comprising:
a liquid crystal disposed between a front substrate and a rear substrate,
a front polariser located in front of the front substrate and rear polariser located behind the rear substrate,
a front retarder located between the front substrate and the front polariser, and
a rear retarder located between the rear substrate and the rear polariser, and
addressing means for addressing each pixel and switching each pixel between different states resulting in different levels of transmission of light through the display, characterised in that,
a light source is located behind the rear polariser,
and
the liquid crystal display is provided with a rear electrode which is partially reflective and partially transmissive and the liquid crystal is divided into a plurality of pixels.

39. (Withdrawn) A transfective display as claimed in claim 38, wherein the front retarder is an achromatic combination retarder.

40. (Withdrawn) A transfective display as claimed in claim 38, wherein the front retarder comprises a front halfwave plate and a front quarterwave plate.

41. (Withdrawn) A transfective display as claimed in claim 40, wherein the front quarterwave plate has a slow axis substantially parallel or normal to a bisectrix of surface alignment directions of the liquid crystal, such that a retardation of the front quarterwave plate, in conjunction with the retardation of the liquid crystal, produces in one state circular polarised light after a single pass.

42. (Withdrawn) A transfective display as claimed in claim 40, wherein the front quarterwave plate has a slow axis substantially parallel or normal to a bisetrix of surface alignment directions of the liquid crystal, such that a retardation of the front quarterwave plate, in conjunction with the retardation of the liquid crystal, produces in a second state linear polarised light after a single pass.

43. (Withdrawn) A transfective display as claimed in claim 40, wherein the front quarterwave plate has a retardation of between 50 nm and 250 nm.

44. (Withdrawn) A transfective display as claimed in claim 38, wherein the rear retarder comprises a rear quarterwave plate.

45. (Withdrawn) A transfective display as claimed in claim 44, wherein the rear quarterwave plate has a slow axis substantially parallel or normal to a bisetrix of surface alignment directions of the liquid crystal, such that a retardation of the rear quarterwave plate, in conjunction with the retardation of the liquid crystal and the front quarterwave plate, produces in one state circular polarised light after a single pass.

46. (Withdrawn) A transfective display as claimed in claim 44, wherein the rear retarder comprises a rear quarterwave plate, and the rear quarterwave plate has a slow axis substantially parallel or normal to a bisetrix of surface alignment directions of the liquid crystal, such that a retardation of the rear quarterwave plate, in conjunction with the retardation of the liquid crystal and the front quarterwave plate, produces in a second state linear polarised light after a single pass.

47. (Withdrawn) A transfective display as claimed in claim 44, wherein the rear quarterwave plate has a retardation of between 100nm and 180nm.

48. (Withdrawn) A transfective display as claimed in claim 38, wherein the rear substrate is provided with a partially reflective and partially transmissive mirror.

49. (Withdrawn) A transfective display as claimed in claim 38, wherein the rear retarder further comprises a rear halfwave plate.

50. (Withdrawn) A transfective display as claimed in claim 44, wherein the rear retarder further comprises a rear halfwave plate and the rear halfwave plate is located between the rear quarterwave plate and the rear polariser.

51. (Currently Amended) A transfective display, comprising:
a liquid crystal divided into a plurality of pixels,
addressing means for addressing each pixel and switching each pixel between different states resulting in different levels of transmission of light through the display,
a flashing backlight located behind the liquid crystal, and
a partially reflective mirror located between the liquid crystal and the backlight for both reflecting ambient light back through the liquid crystal and allowing transmission of light from the backlight through the liquid crystal, ~~characterised in that~~
wherein each pixel is provided with a light filter,
the backlight comprises a plurality of sequentially flashing light sources,
the liquid crystal is disposed between a front substrate and a rear substrate,
a front polariser is located in front of the front substrate, ~~and~~
a rear polariser is located behind the rear substrate, and
the rear substrate is provided with the partially reflective mirror.

52. (Withdrawn) A transfective display as claimed in claim 51, wherein each light filter is a colour light filter, and wherein said sequentially flashing light sources are of different colours.

53. (Withdrawn) A transfective display as claimed in claim 52, wherein said liquid crystal is part of an active matrix display.

54. (Original) A transfective display as claimed in claim 51, wherein the liquid crystal forms a Pi or OCB cell.

55. (Withdrawn) A transfective display as claimed in claim 51, wherein each said sequentially flashing light source is a light emitting diode (LED).

56. (Withdrawn) A transfective display as claimed in claim 52, wherein each colour filter provides a varying level of absorption across its area.

57. (Withdrawn) A transfective display as claimed in claim 56, wherein each colour filter has a transparent region.

58. (Withdrawn) A transfective display as claimed in claim 57, wherein said liquid crystal is provided with a plurality of partially reflective electrodes each having a light transmissive area, and wherein each said transmissive area is optically aligned with a transparent region of one of said colour filters.

59. (Withdrawn) A transfective display as claimed in claim 51, wherein the transfective liquid crystal display comprises

- a liquid crystal disposed between a front substrate and a rear substrate,
- a front polariser located in front of the front substrate and rear polariser located behind the rear substrate,

- a front retarder located between the front substrate and the front polariser, and
- a rear retarder located between the rear substrate and the rear polariser, and

addressing means for addressing each pixel and switching each pixel between different states resulting in different levels of transmission of light through the display, characterised in that,

- a light source is located behind the rear polariser, and

the liquid crystal display is provided with a rear electrode which is partially reflective and partially transmissive and the liquid crystal is divided into a plurality of pixels.

60. (Withdrawn) A transfective display as claimed in claim 48, wherein said partially reflective and partially transmissive mirror comprises a plurality of gaps or holes.

61. (Withdrawn) A transfective display as claimed in claim 51, wherein said partially reflective mirror comprises a plurality of gaps or holes.

62. (Withdrawn) A transfective display as claimed in claim 48, wherein said partially reflective and partially transmissive mirror is a mirror transparent to a predetermined value between 10 and 90%.

63. (Withdrawn) A transfective display as claimed in claim 51, wherein said partially reflective mirror is a mirror transparent to a predetermined value between 10 and 90%.

64. (Withdrawn) A transfective display as claimed in claim 52, wherein for transmission, transfective and reflection modes of the transfective display a voltage level for each said different colour is individually adjusted.

65. (Withdrawn) A transfective display as claimed in claim 38, wherein said front and rear polarisers are parallel polarisers.

66. (Withdrawn) A transfective display as claimed in claim 59, wherein said front and rear polarisers are parallel polarisers.

67. (Withdrawn) A transfective display as claimed in claim 38, wherein said front and rear polarisers are crossed polarisers.

68. (Withdrawn) A transfective display as claimed in claim 59, wherein said front and rear polarisers have crossed polarisation axes.

69. (Withdrawn) A transfective display as claimed in claim 38, in which the effective retardation of the nematic LC is continuously switchable, and, the two front retarders function together as an achromatic combination retarder.

70. (Withdrawn) A transfective display as claimed in claim 51, in which an effective retardation of the nematic LC is continuously switchable, and two front retarders function together as an achromatic combination retarder.

71. (Withdrawn) A transfective display as claimed in claim 38, in which the effective retardation of the nematic LC is continuously switchable, and, the two rear retarders function together as an achromatic combination retarder.

72. (Withdrawn) A transfective display as claimed in claim 51, in which an effective retardation of the LC is continuously switchable, and two rear retarders function together as an achromatic combination retarder.

73. (Withdrawn) A transfective display as claimed in claim 38, in which the front quarter wave plate has its slow axis substantially normal or parallel to the bisectrix of the surface director orientations of the nematic LC, and the two front retarders form an achromatic combination retarder, and the combination retarder is modified to compensate for the residual retardation of the LC at finite voltages.

74. (Withdrawn) A transfective display as claimed in claim 59, in which a front quarter wave plate has its slow axis substantially normal or parallel to a bisectrix of

surface director orientations of the LC, and the front quarter wave plate forms part of an achromatic combination retarder, and the achromatic combination retarder is modified to compensate for residual retardation of the LC at finite voltages.

75. (Withdrawn) A transfective display as claimed in claim 38, in which the rear quarter wave plate has its slow axis substantially normal or parallel to the bisectrix of the surface director orientations of the nematic LC, and the two rear retarders form an achromatic combination retarder, and the combination retarder is modified to compensate for the residual retardation of the LC at finite voltages.

76. (Withdrawn) A transfective display as claimed in claim 59, in which a rear quarter wave plate has its slow axis substantially normal or parallel to a bisectrix of surface director orientations of the LC, and the rear quarter wave plate forms part of an achromatic combination retarder, and the achromatic combination retarder is modified to compensate for residual retardation of the LC at finite voltages.

77. (Withdrawn) A transfective display as claimed in claim 38, which the nematic LC has antiparallel surface director orientation with surface pretilt, and the front substrate functions as a colour filter plate.

78. (Withdrawn) A transfective display as claimed in claim 51, in which the LC has antiparallel surface director orientation with surface pretilt, and a front substrate functions as a colour filter plate.

79. (Withdrawn) A transfective display as claimed in claim 38, which the red, green and blue voltage levels are individually adjusted for transmission, transfective or reflection modes, and the transmission/reflection against voltage curve is wavelength dependent and is different between the reflective and the transmissive mode.

80. (Withdrawn) A transfective display as claimed in claim 64, in which the voltage level for each said different colour are individually adjusted for transmission, transfective or reflection modes, and a transmission/reflection against voltage curve is wavelength dependent and is different between the reflective and the transmissive mode.

81. (Previously Presented) A transfective display as claimed in claim 51, in which the LC has substantially parallel surface director orientations.

82. (Previously Presented) A transfective display as claimed in claim 81, in which the LC is formed from a Pi cell.

83. (Withdrawn) A transfective display as claimed in claim 70, in which the LC is a nematic LC.

84. (Withdrawn) A transfective display as claimed in claim 80, in which the different colours are red, green and blue.